

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL LOCATED AT THE INTERSECTION OF MD 140 (EAST WEST HIGHWAY) AND MEADOWBROOK LANE IN MONTGOMERY COUNTY.

THE RECONSTRUCTION WILL UPGRADE THE EXISTING SPAN WIRE SIGNAL AT THIS INTERSECTION TO A MAST ARM SIGNAL, INCLUDING NEW LED BLACK FACE TRAFFIC SIGNAL INDICATIONS. APS AND CPS WILL BE ADDED FOR THE EAST AND WEST LEGS OF THE INTERSECTION. SAMPLING LOOPS WOULD BE REPLACED BY VIDEO DETECTION SAMPLING CAMERAS.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR PHASE, SEMI-TRAFFIC ACTUATED MODE, WITH THE MD 410 APPROACHES RUNNING CONCURRENTLY AND THE MEADOWBROOK LANE APPROACHES RUNNING CONCURRENTLY. AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED FOR BOTH THE EAST AND WEST LEGS.

SPECIAL NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE. THE CONTRACTOR SHALL NOTIFY MR. KAMAL HAMUD AT (240) 777-8761 72 HOURS IN ADVANCE OF ALL WORK. THE APS PUSHBUTTONS SHALL BE DELIVERED TO MR. KEITH LORD (301) 674-8965 AT THE

MONTGOMERY COUNTY TECHNICAL CENTER, SIX(6) WEEKS PRIOR TO INSTALLATION.

EQUIPMENT LIST FOR CONTRACT NO. XX4455185

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

ITEM	QUANTITY	UNIT	DESCRIPTION
9042	1	EA	[UPDATED] CONTROLLER ASC II WITH TELEMETRY
9044	1	EA	BASE MOUNTED CONTROLLER CABINET, SIZE 6
9086	1	EA	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
9571	157	SF	[UPDATED] SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
	1	EA	D3-1 (128"x 16") (Meadowbrook ^{LN} ₈₃₀₀ →) MAST ARM MOUNTED
	1	EA	D3-1 (128"x 16") (← Meadowbrook ^{LN} ₈₃₀₀) MAST ARM MOUNTED
	1	EA	D3-1 (128"x 16") (← Meadowbrook ^{LN} ₈₂₀₀) MAST ARM MOUNTED
	1	EA	D3-1 (128"x 16") (Meadowbrook ^{LN} ₈₂₀₀ →) MAST ARM MOUNTED
	1	EA	D3-1 (96"x 16") (EastWest ^{HWY} ₂₈₀₀ →) MAST ARM MOUNTED
	1	EA	D3-1 (96"x 16") (← EastWest ^{HWY} ₂₈₀₀) MAST ARM MOUNTED
	1	EA	D3-1 (96"x 16") (← EastWest ^{HWY} ₂₈₀₀) MAST ARM MOUNTED
	1	EA	D3-1 (96"x 16") (EastWest ^{HWY} ₂₈₀₀ →) MAST ARM MOUNTED
	2	EA	SHIELD ASSEMBLY (30"x51") POLE MOUNTED
	2	EA	SHIELD ASSEMBLY (48"x75") POLE MOUNTED

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM	QUANTITY	UNIT	DESCRIPTION
1003	3	EA	MAINTENANCE OF TRAFFIC
2001	6	CY	CLASS 2 EXCAVATION
2002	2	CY	TEST PIT EXCAVATION
5004	775	LF	12" HEAT APPL WHITE PERM PREF THERMO PVMT MARKINGS
5005	70	LF	24" HEAT APPLIED WHITE PERM PREF THERMO PVMT MARKINGS
5006	140	LF	5" HEAT APPLIED WHITE OR YELLOW PERM PVMT LINE MARKINGS
5007	1400	LF	REM OF EXISTING PERM PVMT LINE MARKINGS ANY WIDTH
6001	178	LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	1010	SF	5 INCH CONCRETE SIDEWALK
6003	85	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	1	EA	2 WIRE CENTRAL CONTROL UNIT
8007	4	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8008	4	EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8013	4	EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8015	2	EA	MAST ARM POLE & 38 FT MAST ARM ANY 'T' DIMENSION
8021	1	EA	REM & DISPOSE MAT & EQUIP PER ASSIGN
8024	1	EA	TWIN MAST ARM POLE & 50 FT/70 FT MAST ARMS ANY 'T' DIMENSION
8025	4	EA	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8027	450	LF	12 - PAIR COMMUNICATION CABLE, SELF SUPPORTING OR JELLYFILLED
8029	60	LF	CABLE- 1 CONDUCTOR, 250 KCML, CU, USE
8030	300	LF	DISCONNECT, PULL-BACK & REROUTE CABLES
8032	300	LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8034	450	LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8036	157	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8038	750	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8041	1	EA	METERED SERVICE PEDESTAL EMBEDDED
8045	6	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8049	60	LF	3 INCH DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER
8050	30	EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8054	600	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8056	750	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8057	1250	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8064	1	EA	INSTALL CONTROLLER AND CABINET - POLE MOUNT
8065	1	EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
NEG	4	TN	2" HOT MIX ASPHALT SUPERPAVE
NEG	10	TN	6" HOT MIX ASPHALT SUPERPAVE
NEG	12	TN	12" (2 -6") GRADED AGGREGATE FOR BASE COURSE

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

Mr. JEFFERY WENTZ
Assistant District Engineer - Traffic
Phone: (301) 513-7358

Mr. Wayne Mowdy
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

Mr. Augie Rebish
Utility Engineer
Phone: (301) 513-7350

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

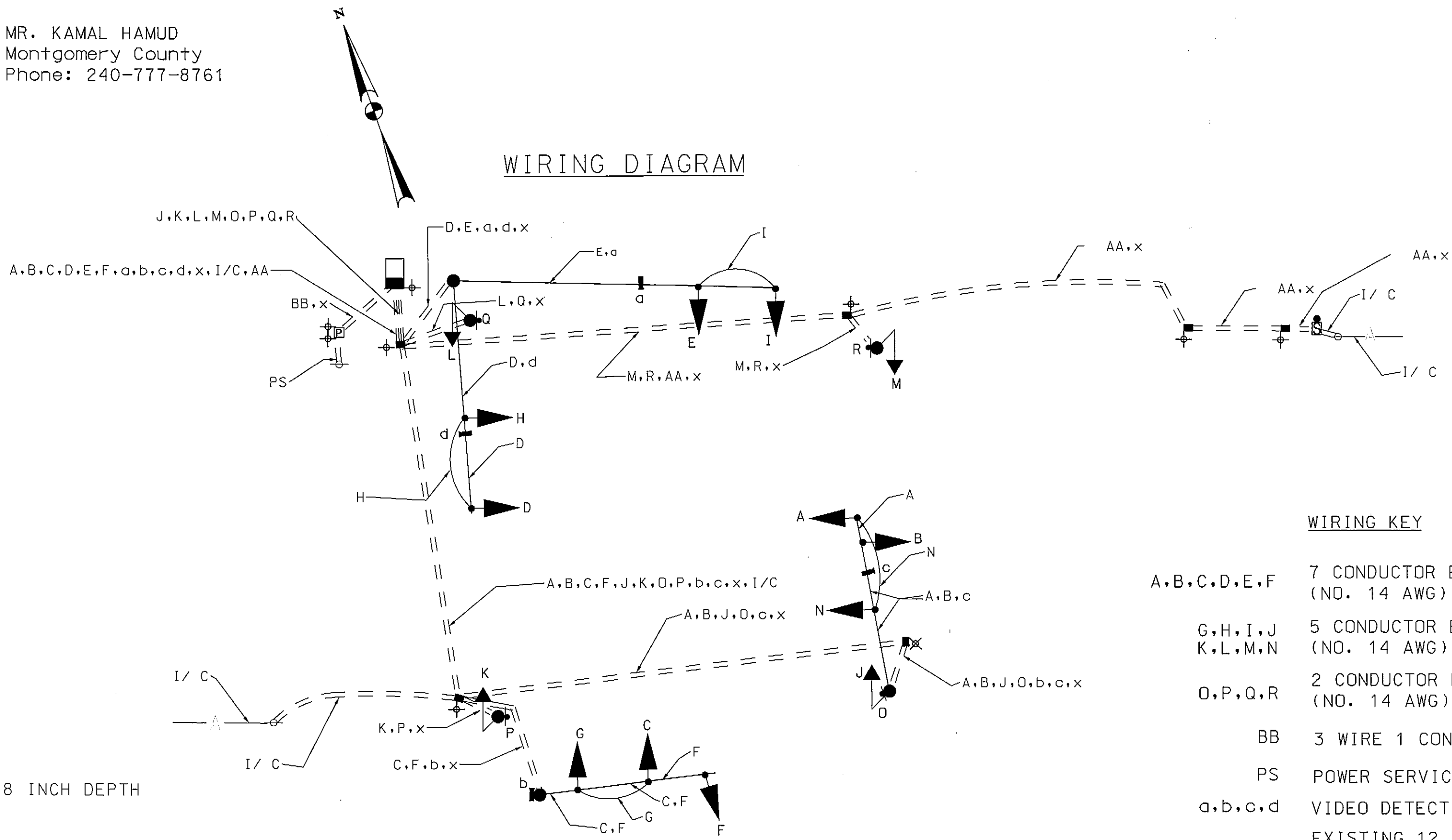
Mr. Ed Rodenhizer
Supervisor, Signal Operations
Phone: 410-787-7650

MR. KAMAL HAMUD
Montgomery County
Phone: 240-777-8761

PHASING SEQUENCE CHART

	1	2	3	4	5	6	7	8	9	10	10	11	12	13	
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	
PHASE 2 AND 6	G	G	G	G	G	R	R	R	R	R	DW	DW	DW	DW	↑
2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	R	DW	DW	DW	DW	↑
PHASE 4 AND 8	R	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	↓
4 AND 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	↓
PHASE 4 ALT AND 8 ALT	R	R	R	R	R	G	G	G	G	G	WK	WK	WK	WK	↑
PED CLEARANCE	R	R	R	R	R	G	G	G	G	G	FL/DW	FL/DW	FL/DW	FL/DW	↑
4 ALT AND 8 ALT CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	↓
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	↑

WIRING DIAGRAM



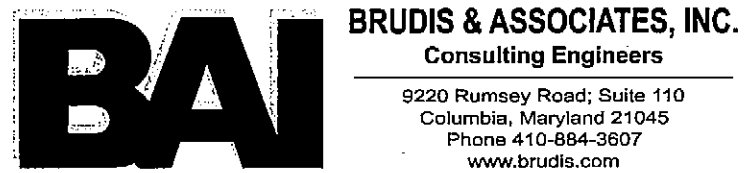
TOD NO:XX445-18
SHA NO:MO206A53/B53
MD 410 @ MEADOW BROOK LA

WIRING KEY

A,B,C,D,E,F	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
G,H,I,J K,L,M,N	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
O,P,Q,R	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
BB	3 WIRE 1 CONDUCTOR 250 KCML CABLE
PS	POWER SERVICE BY PEPSCO
a,b,c,d	VIDEO DETECTION CABLE
I/C	EXISTING 12 PAIR COMMUNICATION CABLE (NO. 19 AWG)
AA	PROPOSED 12 PAIR COMMUNICATION CABLE (NO. 19 AWG)
x	1 CONDUCTOR (NO. 6 AWG)
+	STRANDED BARE COPPER GROUND WIRE
+	GROUND ROD

C. EQUIPMENT TO BE RETURNED TO MR. KEITH LORD (Phone: 301-279-1291) AT MONTGOMERY COUNTY SIGNAL SHOP ADDRESS- 1283, BUILDING C, SEVEN LOCKS ROAD, ROCKVILLE , MARYLAND 20854

QUANTITY	UNIT	DESCRIPTION
1	EA	BASE CABINET SIZE 5
1	EA	BASE CABINET SIZE 6
1	EA	ECONOLITE CONTROLLER
2	EA	AUTOSCOPE VIDEO DETECTION CAMERAS



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 410 (EAST WEST HIGHWAY) @ MEADOWBROOK LANE
TRAFFIC SIGNAL MODIFICATION

GENERAL INFORMATION SHEET

SCALE	NTS	ADVERTISED DATE	01/2009	CONTRACT NO.	XX4455185
DESIGNED BY	N.GUPTA	COUNTY	MONTGOMERY	DRAWN BY	N.GUPTA
CHECKED BY	J.BOLING	LOGMILE	15041002.05	TIMS NO.	1588
F.A.P. NO.		TOD NO.			
TS NO.	2136- C	DRAWING	OF	SHEET NO.	3 OF 3